A Microprocessor-Based Digital Wattmeter System Design

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Energy Conversion Engineering Conference, 1996. IECEC 96. Proceedings of the 31st Intersociety;Publication Date: 11-16 Aug 1996;Vol: 3,On page(s): 1840-1845 vol.3;ISBN: 0-7803-3547-3

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Summary

A Digital Telewattmeter System (DTS) has been designed, developed and its prototype real time clock board has been tested according to a sponsoring agency's (utilities, manufacturing company, etc.) specifications. The DTS is a device that measures electrical energy consumption and reports via telephone. At a remote location, a microprocessor controlled wattmeter will sense current, voltage and time and convert this into kilowatt hours. For customer convenience, this information is displayed continuously. Every month, the remote location is polled by a main computer and the actual current value of kilowatt hours is read for its use by the billing department. This paper deals with the designing, assembling, and the operation of the DTS as an innovative design and its use as a load management device. Test results and specifications of the DTS showed that its basic properties conform with other available similar products and has more features